CLAIMS:

1. A method comprising:

operating a processor in a first computational state;

operating the processor in a second computational state in response to a non-benign heart rhythm; and

executing discriminatory arrhythmia classification algorithms with the processor when the processor is in the second computational state.

2. The method of claim 1, further comprising operating the processor in the first computational state without regard to heart rate.

3. The method of claim 1, further comprising operating the processor in the second computational state without regard to heart rate.

4. The method of claim 1, wherein operating the processor in the second computational state in response to a non-benign heart rhythm comprises operating the processor in the second computational state in response to evidence of one of atrial fibrillation and atrial flutter with atrioventricular dissociation and R-R interval stability.

5. The method of claim 4, wherein the evidence of one of atrial fibrillation and atrial flutter is a function of timing of P-waves and R-waves.

6. The method of claim 1, wherein operating the processor in the second computational state in response to a non-benign heart rhythm comprises operating the processor in the second computational state in response to insufficient evidence of atrial fibrillation and atrial flutter and sinus tachycardia, and in response to sufficient evidence of R-R interval stability.

7. The method of claim 6, wherein the evidence of atrial fibrillation and atrial flutter and sinus tachycardia is a function of timing of P-waves and R-waves.

8. The method of claim 1, further comprising operating the processor in the first computational state in response to a benign heart rhythm.

9. The method of claim 8, wherein the benign rhythm comprises at least one of a normal sinus rhythm, sinus tachycardia, atrial fibrillation, atrial flutter, 1:1 supraventricular tachycardia, a paced rhythm, bigeminy and non-sustained ectopy.

10. The method of claim 1, further comprising maintaining the processor in the first computational state in response to a benign heart rhythm.

11. The method of claim 1, wherein operating the processor in the second computational state comprises operating the processor in one of a monitoring zone and a therapy zone, wherein operating the processor in the monitoring zone comprises monitoring the rhythm without delivery of therapy to the heart.

12. The method of claim 1, wherein the processor is included in an implanted cardiac monitoring device.

13. The method of claim 1, wherein the discriminatory arrhythmia classification algorithms comprise at least one of morphological analysis, operations on timing of P-waves and operations on timing of R-waves.

14. A computer-readable medium comprising instructions for causing a programmable processor to:

operate the processor in a first computational state;

operate the processor in a second computational state in response to a non-benign heart rhythm; and

execute discriminatory arrhythmia classification algorithms with the processor when the processor is in the second computational state.

15. The medium of claim 14, the instructions further causing the processor to operate the processor in the first computational state without regard to heart rate.

16. The medium of claim 14, the instructions further causing the processor to operate the processor in the second computational state without regard to heart rate.

17. The medium of claim 14, wherein operating the processor in the second computational state in response to a non-benign heart rhythm comprises operating the processor in the second computational state in response to evidence of one of atrial fibrillation and atrial flutter with atrioventricular dissociation and R-R interval stability.

18. The medium of claim 17, wherein the evidence of one of atrial fibrillation and atrial flutter is a function of timing of P-waves and R-waves.

19. The medium of claim 14, wherein operating the processor in the second computational state in response to a non-benign heart rhythm comprises operating the processor in the second computational state in response to insufficient evidence of atrial fibrillation and atrial flutter and sinus tachycardia, and in response to sufficient evidence of R-R interval stability.

20. The medium of claim 19, wherein the evidence of atrial fibrillation and atrial flutter and sinus tachycardia is a function of timing of P-waves and R-waves.

21. The medium of claim 14, the instructions further causing the processor to operate the processor in the first computational state in response to a benign heart rhythm.

22. The medium of claim 21, wherein the benign rhythm comprises at least one of a normal sinus rhythm, sinus tachycardia, atrial fibrillation, atrial flutter, 1:1 supraventricular tachycardia, a paced rhythm, bigeminy and non-sustained ectopy.

23. The medium of claim 14, the instructions further causing the processor to maintain the processor in the first computational state in response to a benign heart rhythm.

24. The medium of claim 14, wherein operating the processor in the second computational state comprises operating the processor in one of a monitoring zone and a therapy zone, wherein operating the processor in the monitoring zone comprises monitoring the rhythm without delivery of therapy to the heart.

25. The medium of claim 14, wherein the processor is included in an implanted cardiac monitoring device.

26. The medium of claim 14, wherein discriminatory arrhythmia classification algorithms comprise at least one of morphological analysis, operations on timing of P-waves and operations on timing of R-waves.

27. A method comprising:

sensing a cardiac rhythm;

operating a processor in a first computational state when the sensed cardiac rhythm is a benign rhythm; and

operating the processor in a second computational state when the sensed cardiac rhythm is a non-benign rhythm.

28. The method of claim 27, wherein the benign rhythm comprises at least one of a normal sinus rhythm, sinus tachycardia, atrial fibrillation, atrial flutter, 1:1 supraventricular tachycardia, a paced rhythm, bigeminy and non-sustained ectopy.

29. The method of claim 27, wherein operating the processor in the second computational state comprises executing discriminatory arrhythmia classification algorithms to classify the heart rhythm.

30. The method of claim 27, wherein operating the processor in the second computational state comprises monitoring the non-benign rhythm.

31. The method of claim 27, wherein operating the processor in the second computational state comprises delivering therapy to the non-benign rhythm.

32. A computer-readable medium comprising instructions for causing a programmable processor to:

sense a cardiac rhythm;

operate the processor in a first computational state when the sensed cardiac rhythm is a benign rhythm; and

operate the processor in a second computational state when the sensed cardiac rhythm is a non-benign rhythm.

33. The medium of claim 32, wherein the benign rhythm comprises at least one of a normal sinus rhythm, atrial fibrillation, atrial flutter, 1:1 supraventricular tachycardia, a paced rhythm, bigeminy and non-sustained ectopy.

34. The medium of claim 32, wherein operating the processor in the second computational state comprises executing discriminatory arrhythmia classification algorithms to classify the heart rhythm.

35. The medium of claim 32, wherein operating the processor in the second computational state comprises monitoring the non-benign rhythm.

36. The medium of claim 32, wherein operating the processor in the second computational state comprises delivering therapy to the non-benign rhythm.

37. A device comprising:

a sensor proximal to a ventricle of a heart; and

a processor that operates in one of a first computational state and a second computational state as a function of a cardiac rhythm sensed via the sensor,

wherein the processor executes discriminatory arrhythmia classification algorithms when the processor is in the second computational state.

38. The device of claim 37, further comprising an analog-to-digital converter that converts an analog signal sensed via the sensor to a digital signal.

39. The device of claim 37, wherein the processor operates in the first computational state when the rhythm is benign and in the second computational state when the rhythm is non-benign.

40. The device of claim 39, wherein a benign rhythm comprises at least one of a normal sinus rhythm, sinus tachycardia, atrial fibrillation, atrial flutter, 1:1 supraventricular tachycardia, a paced rhythm, bigeminy and non-sustained ectopy.

41. The device of claim 37, further comprising a second sensor proximal to an atrium of the heart, wherein the processor operates in one of the first computational state and the second computational state as a function of a cardiac rhythm sensed via the second sensor.

42. A method comprising:

executing discriminatory arrhythmia classification algorithms with a processor in response to a non-benign heart rhythm; and

classifying the heart rhythm.

43. The method of claim 42, further comprising executing discriminatory arrhythmia classification algorithms without regard to heart rate.

44. The method of claim 42, wherein the non-benign rhythm comprises at least one of ventricular tachycardia, ventricular fibrillation or dual tachycardia.

45. The method of claim 42, wherein executing discriminatory arrhythmia classification algorithms with a processor in response to the non-benign heart rhythm comprises executing discriminatory arrhythmia classification algorithms with a processor in response to measured timing of P-waves and R-waves.

46. The method of claim 45, wherein executing discriminatory arrhythmia classification algorithms with a processor in response to the non-benign heart rhythm further comprises executing discriminatory arrhythmia classification algorithms with

a processor in response to accumulated evidence of at least one of sinus tachycardia, atrial fibrillation and atrial flutter.

47. The method of claim 42, further comprising delivering therapy to the heart as a function of the classification.

48. The method of claim 42, further comprising monitoring the rhythm as a function of the classification.

49. A computer-readable medium comprising instructions for causing a programmable processor to:

execute discriminatory arrhythmia classification algorithms with a processor in response to a non-benign heart rhythm; and

classify the heart rhythm.

50. The medium of claim 49, the instructions further causing the processor to execute discriminatory arrhythmia classification algorithms without regard to heart rate.

51. The medium of claim 49, wherein the non-benign rhythm comprises at least one of ventricular tachycardia, ventricular fibrillation or dual tachycardia.

52. The medium of claim 49, wherein executing discriminatory arrhythmia classification algorithms with a processor in response to the non-benign heart rhythm comprises executing discriminatory arrhythmia classification algorithms with a processor in response to measured timing of P-waves and R-waves.

53. The medium of claim 52, wherein executing discriminatory arrhythmia classification algorithms with a processor in response to the non-benign heart rhythm further comprises executing discriminatory arrhythmia classification algorithms with a processor in response to accumulated evidence of at least one of sinus tachycardia, atrial fibrillation and atrial flutter.

54. The medium of claim 49, the instructions further causing the processor to deliver therapy to the heart as a function of the classification.

55. The medium of claim 49, the instructions further causing the processor to monitor the rhythm as a function of the classification.